

REMARKS

This amendment responds to the Office Action mailed on July 29, 2004. Filed concurrently herewith is a *Request for a Three Month Extension of Time* which extends the shortened statutory period for response to expire on January 31, 2005. Accordingly, Applicants respectfully submit that this response is being timely filed.

Claims 1 and 3-7 were pending. By the above amendment, claims 1, 3 and 7 were amended to more clearly define protection to which Applicant is entitled. Furthermore, new claims 17-19 were submitted for examination on their merits. Accordingly, claims 1, 3-7 and 17-19 are now pending in the present application, and Applicant believes these claims are in proper condition for allowance for the reasons set forth below.

Claim Objections

Paragraph 3 of the Office Action objects to claims 1 and 3 due to informalities in the claims. Applicant has corrected such informalities in the above amendments and respectfully request withdrawal of the rejection.

Claim Rejections Under 35 U.S.C. §103

Paragraph 6 of the Office Action rejects claims 1 and 5-6 under 35 U.S.C. § 102(b) as anticipated by or, in the alternative, under 35 U.S.C. §103(a) as being obvious over Ipson (U.S. Patent 4,945,281). Applicant respectfully traverses this rejection because Ipson fails to teach, suggest, or disclose every element of the claims. For example, claim 1 requires “a dielectric barrier discharge-driven light source comprising . . . a first electrode coupled to an outside portion of said first flat panel dielectric barrier and a second electrode coupled to said second flat panel dielectric barrier . . . and one or more stems coupled to said first and second flat panel dielectric barriers” Ipson cannot anticipate claim 1 nor render it obvious because Ipson fails to disclose i) a dielectric barrier discharge device, ii) electrodes coupled to outside portions of the flat panel dielectric barriers,

and iii) stems coupled to flat panel dielectric barriers. Accordingly, the Office Action fails to establish a *prima facie* case of obviousness in setting forth the present rejection.

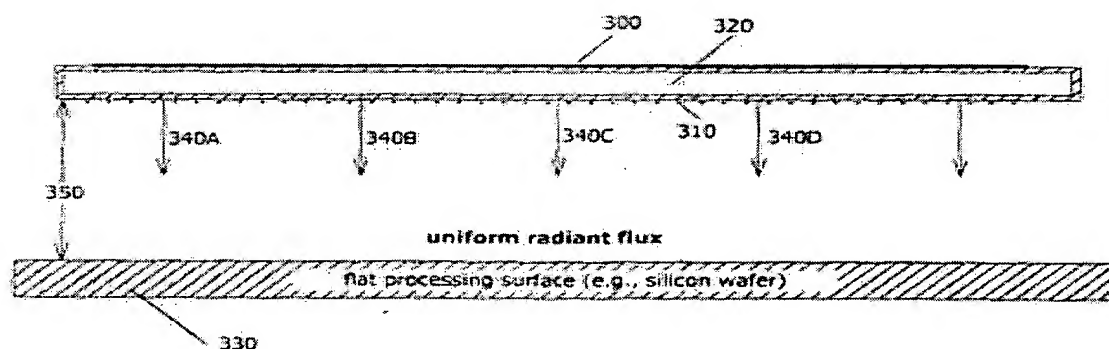
According to the Manual of Patent Examining Procedure § 2142:

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally the prior art reference (or references when combined) must teach or suggest all the claim limitations.

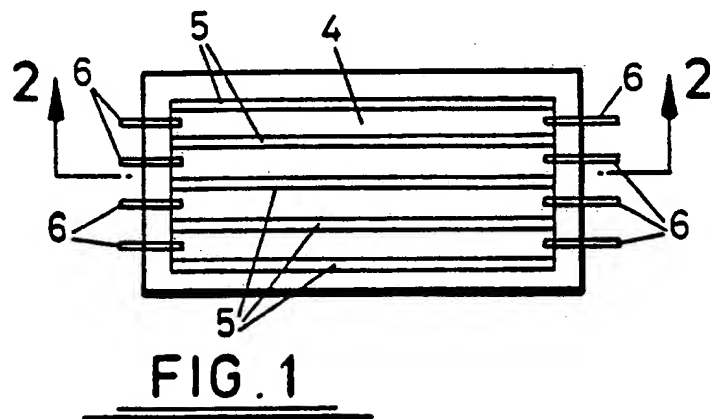
Applicant respectfully submits that the requirements for establishing an obviousness rejection have not been met. First, the prior art reference must teach or suggest all the limitations of the claims. See *In re Wilson*, 165 U.S.P.Q. 494, 496 (C.C.P.A. 1970). Here, Ipson fails to teach a dielectric barrier discharge-driven light source in which the electrodes are coupled to surfaces of the flat panel dielectric barriers themselves. Claim 1 recites a “dielectric barrier discharge-driven light source” including “a first electrode coupled to an outside portion of said first flat panel dielectric barrier and a second electrode coupled to said second flat panel dielectric barrier.” The electrodes are positioned on the surfaces of the dielectric barriers themselves so that they are in close proximity to the entire discharge space but do not come into contact with the enclosed gas. One of the major advantages achieved through this configuration is that the present invention is able to generate a uniform radiant flux, as illustrated below in FIG. 3 of the present application.

Figure 3

Flat Panel DBD (V)UV light source



Contrarily, Ipson fails to teach or suggest a dielectric barrier discharge (DBD) light source where the electrodes are separated from the gas discharge space by the dielectric barriers themselves. Instead, the light source described in Ipson is an entirely different type of light source than a DBD light source and is similar to a conventional fluorescent bulb light source. In the Ipson light source, the electrodes [6] are positioned at the ends of the channels [4] in the sealed gas enclosure and in contact with gas in the channels [4], as illustrated in FIG. 1 of Ipson below:



As can be seen, the Ipson light source is not a DBD light source where the electrodes are positioned on the outside of the dielectric barriers and where the dielectric barriers separate the electrodes from the enclosed gas. The Ipson light source is a completely different device from the present invention. While Ipson does disclose an alternative embodiment where the electrodes [6] do not come into contact with the gas in the channels [4], as illustrated in FIG. 3 of Ipson, the electrodes [6] are again positioned at the ends of the discharge channel [4] in this alternative embodiment and are not positioned on the outside of the transparent sheets of material [1] and [2] (i.e., the elements asserted in the Office Action as corresponding to the flat panel dielectric barriers of claim 1). Further, in this alternative embodiment of Ipson, the electrodes [6] are not positioned on the outer surfaces of the flat panel dielectric barriers [1] and [2].

In order for the DBD light source recited in claim 1 of the present invention to produce the desired uniform radiant flux, the electrodes must be positioned on and adjacent to the flat panel dielectric barriers, as illustrated in FIG. 3 of the present application. Clearly, Ipson fails to teach or suggest “a dielectric barrier discharge-driven light source” including “a first electrode coupled to an

outside portion of said first flat panel dielectric barrier and a second electrode coupled to said second flat panel dielectric barrier,” as recited in claim 1 of the present invention. Accordingly, Ipson does not teach or suggest each and every limitation of claim 1 and cannot anticipate nor render claim 1 obvious.

Further evidencing the failure of the Office Action to establish a *prima facie* case of obviousness, Ipson also fails to teach or suggest “one or more stems disposed between said first and second flat panel dielectric barriers and coupled to said first and second flat panel dielectric barriers via transfer foil technology,” as recited in claim 1. At best, Ipson discloses “disposing” one or more stems between the first and second flat panel dielectric barriers but fails to disclose “coupling” the stems to the first and second flat panel dielectric barriers. In fact, Ipson teaches that its spacers do not need to be coupled to the dielectric barriers. In column 4, lines 61 through column 5, line 1, Ipson teaches:

It will be noted from the above that it is not necessary for the spacers 9 to be sealed at their upper and lower edges to the upper and lower sheets 7 and 8. Depending upon the length, width and overall dimensions of the light source the barriers represented by the spacers between adjacent discharge channels may vary considerably. It is simply necessary to provide sufficient extensive barriers to ensure that a discharge in one channel does not prevent the initiation of a discharge in an adjacent channel. (emphasis added)

As can be seen, the entire purpose of the spacers in the Ipson reference are to create separate discharge channels [4] in the light source, not to provide support between the upper and lower sheets. Thus, Ipson does not teach or suggest that the spacers are actually coupled to the upper and lower sheets, where Ipson oppositely teaches that sealing the spacers to the upper and lower sheets is not necessary.

Applicants note there are a number of evaluations required under Section 103. One highly relevant inquiry is “[t]he relationship between the problems which the inventor . . . was attempting to solve and the problem to which any prior art reference is directed.” *Stanley Works v. McKinney Manufacturing Co.*, 520 F.Supp. 101, 216 U.S.P.Q. 298, 304 (D. Del. 1981). Thus, in analyzing the prior art under Section 103 of the Act, we must clearly comprehend the problem addressed by the

present inventor and that must be compared or contrasted, as the case may be, with the problems addressed by the prior art.

Pursuing further the "problem" analyses required under Section 103 of the U.S. Patent Act, the applicability of any reference against the claims of a pending U.S. patent application requires compliance with *In re Gibbons*, 100 U.S.P.Q. 398, where it is stated that:

"In considering the question of invention, it is necessary to determine whether or not the art relied upon contains adequate directions for the practice of the invention without resort to the involved application. "

The problem solved by providing support stems between the first and second flat panel dielectric barriers in the present invention is to withstand stresses presented when a pressure other than atmospheric pressure is introduced between the first and second flat panel dielectric barriers. Applicants submit that such adequate directions for coupling support stems to the first and second flat panel dielectric barriers are only found in the subject application and are not located anywhere within the Ipson reference. The purpose of positioning spacers between the upper and lower sheets in Ipson is merely to create separate discharge channels, where Ipson even states that the spacers are not required to be sealed to the upper and lower sheets. To the contrary, the discharge space between the first and second flat panel dielectric barriers in the present invention is a single discharge space that is not separated into multiple, separate discharge spaces by the stems.

Accordingly, Ipson fails to teach or suggest a dielectric barrier discharge device having electrodes coupled to outside portions of the flat panel dielectric barriers and stems coupled to both of the flat panel dielectric barriers, as recited by claim 1. Since Ipson fails to even so much as disclose coupling its spacers to its flat panel dielectric barriers, it necessarily follows that Ipson must fail to teach or suggest coupling the stems to the flat panel dielectric barriers via transfer foil technology. Thus, Ipson fails to provide adequate directions for practicing the invention recited in claim 1 without resorting to the teachings of the present application. Applicant therefore respectfully requests withdrawal of the § 103 rejection of claim 1 and its respective dependent claims. Reconsideration is requested.

The Office Action also rejected claims 3 and 7 under 35 U.S.C. §103(a) as being obvious over Ipson. Claims 3 and 7 are allowable because they depend from claim 1, which is allowable for

at least the reasons stated above. Accordingly, Applicant respectfully requests withdrawal of the rejection as to claims 3 and 7. Furthermore, as set forth above, in order to establish a *prima facie* case of obviousness, the cited prior art must teach or suggest each and every one of the claim limitations. By its own admission, the Office Action recites that Ipson fails to disclose the circular flat panel shaped claimed in claim 3 and the dielectric barriers being comprised of silica claimed in claim 7. As such, Ipson does not teach or suggest each and every claim limitation of claims 3 and 7, and these dependent claims are further separately patentable for this reason. Reconsideration is respectfully requested.

The Office Action rejected claim 4 under 35 U.S.C. §103(a) as being obvious over Ipson in view of Foggiato et al. (U.S. Patent No. 6,049,086). This rejection is respectfully traversed, and reconsideration is requested based on the following remarks.

Initially, claim 4 is allowable because its depends from claim 1, which is allowable for at least the reasons stated above. It is respectfully submitted that claim 4 is further allowable because no motivation exists for combining the teachings of Ipson with Foggiato. The Office Action admits that Ipson fails to disclose stems comprised of quartz, but relies upon Foggiato as teaching that feature. It should be noted that the prior art relied upon, coupled with the knowledge generally available at the time of the invention, must contain some suggestion or incentive that would have motivated the skilled artisan to modify a reference or to combine references. *See ATD Corp. v. Lydall, Inc.*, 159 F.3d 534, 48 U.S.P.Q.2d 1321 (Fed. Cir. 1998); *In re Oetiker*, 977 F.2d 1443, 24 U.S.P.Q.2d 1443 (Fed. Cir. 1992); *Symbol Tech., Inc. v. Opticon, Inc.*, 935 F.2d 1569, 19 U.S.P.Q.2d 1241 (Fed. Cir. 1991); *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988).

The mere fact that something can be modified or combined is not enough for an obviousness rejection. *See In re Mills*, 916 F.2d 680, 16 U.S.P.Q.2d 1430 (Fed. Cir. 1990); *In re Gordon*, 733 F.2d 900, 221 U.S.P.Q. 1125 (Fed. Cir. 1984). The Federal Circuit has stated that the “obvious to try” standard is not the correct standard to apply. *See In re Roemer*, 258 F.3d 1303, 59 U.S.P.Q.2d 1527 (Fed. Cir. 2001); *In re Dow Chem. Co.*, 837 F.2d 469, 5 U.S.P.Q.2d 1529 (Fed. Cir. 1988).

It is also impermissible to use hindsight to determine obviousness. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q.2d 1596, 1600 (Fed. Cir. 1988)(stating “One cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention.”).

Here, there is no teaching or suggestion in any of the references to utilize a spacing stem made of quartz in a flat panel dielectric barrier discharge lamp. The Office Action states that it would have been obvious to employ the quartz spacer of Foggato in the light source of Ipson to provide sufficient strength to withstand pressure differentials between the discharge space and the exterior of the device. However, the purpose of the spacers in Ipson are merely to create separate discharge channels in the light source, where Ipson does not even require its spacers to come into contact with upper and lower sheets. Thus, one skilled in the art would not be motivated to utilize support spacers made of quartz or any other material in place of the channel-creating spacers of Ipson. Thus, the Office Action fails to illustrate how the references themselves provide any motivation to combine the references or any indication that if so combined one would be successful in achieving the invention as claimed in claim 4. Thus, combining the references in the manner suggested by the Action amounts to at best the improper use of hindsight based on Applicant's disclosure or an improper application of the "obvious to try" test. Reconsideration is respectfully requested.

New Claims

New claims 17-19 are also submitted for examination on their merits, where new claims 17-19 further contain the points of novelty described hereinabove in distinguishing the present invention from the cited prior art of record. Applicant believes that claims 17-19 are also allowable over the art of record for the same reasons set forth above with respect to claims 1 and 3-7.


CONCLUSION

In each case, the pending rejections should be reconsidered in view of the amendments and remarks herein. Applicants believe that this case is in good condition for allowance, and a Notice of Allowance is earnestly solicited. If a telephone or further personal conference would be helpful, the Examiner is invited to call the undersigned, who will cooperate in any appropriate manner to advance prosecution. The Commissioner is directed and authorized to charge all additional required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 50-2613. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

PAUL, HASTINGS, JANOFSKY & WALKER LLP

Dated: 1/28/05

By: 
Bradley D. Blanche
Reg. No. 38,387

PAUL, HASTINGS, JANOFSKY & WALKER LLP
3579 Valley Center Drive
San Diego, CA 92130
714-668-6255 (Telephone)
714-668-6355 (Facsimile)
USPTO Customer Number 36183